Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed

   1.1. Name of the Data, data collection Project, or data-producing Program:
   2014 AK DOT Lidar: Bradfield to Behms Corridor, Alaska

   1.2. Summary description of the data:
   Because no metadata record was provided with the Bradfield to Behms Corridor data, this record was created by the NOAA Office for Coastal Management (OCM) based on information supplied in the Bradfield to Behms Corridor Quality Assurance Report of DOT Roads to Resources Project, the Tetra Tech UAF Light Detection and Ranging (LiDAR) and Ortho-Imagery Data Project Report Bradfield to Behms Corridor, and the Hoonah Corridor metadata. Links to both reports are provided in the URL section of this record.

   Tetra Tech was contracted by the University of Alaska Fairbanks (UAF) to provide LiDAR and ortho-imagery data for the Road to Resources in Alaska Program. Tetra Tech collected LIDAR data and aerial imagery during the fall of 2013 and the spring/summer of 2014.

   This classified point cloud data is part of a data set of LiDAR point cloud data, derived elevation products and orthoimagery. The data were acquired along 5 corridors in South Eastern Alaska near Ketchikan and Juneau. The data were procured by GINA (Geographic Information Network of Alaska) at the University of Fairbanks (UAF) on behalf of the Alaska DoT (Department of Transportation). The 5 corridors are identified as Anita Bay, Bradfield to Behms, Hoonah, Revilla and Wrangell. The classified data has been classified as follows: Class 1: Unclassified, Class 2: Bare-earth ground, Class 3: Low vegetation, Class 4: Medium Vegetation, Class 5: High Vegetation, Class 7: Noise, Class 8: Ground Model Keypoints, Class 9: Water. Low vegetation (0 - 6 ft), medium vegetation (6 - 15 ft), high vegetation (> 15 ft).

   The NOAA Office for Coastal Management (OCM) downloaded this lidar data from the AK DGGS site (https://elevation.alaska.gov/) and processed the data to be available on the Digital Coast Data Access Viewer (DAV). OCM processed all points to the Digital Coast Data Access Viewer (DAV).

   In addition to these lidar point data, the bare earth Digital Elevation Models (DEM)

created from the lidar point data are also available. These data are available for custom download at the link provided in the URL section of this metadata record.

1.3. Is this a one-time data collection, or an ongoing series of measurements?
One-time data collection

1.4. Actual or planned temporal coverage of the data:
2014-06-27, 2014-06-26, 2014-07-11

1.5. Actual or planned geographic coverage of the data:
W: -131.614093, E: -131.377572, N: 56.188409, S: 55.959214

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Lidar point cloud (digital)

1.7. Data collection method(s):
(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

    1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

    2.1. Name:
    NOAA Office for Coastal Management (NOAA/OCM)

    2.2. Title:
    Metadata Contact

    2.3. Affiliation or facility:
    NOAA Office for Coastal Management (NOAA/OCM)

    2.4. E-mail address:
    coastal.info@noaa.gov

    2.5. Phone number:
    (843) 740-1202

3. Responsible Party for Data Management
Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

    3.1. Name:

3.2. Title:
    Data Steward

4. Resources
Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

5. Data Lineage and Quality
NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible
(describe or provide URL of description):
    Process Steps:
        - The LiDAR data for the Bradfield to Behms corridor was acquired on June 26 and 27 and July 11 of 2014. SBET and shapefile of the trajectory are located with the point cloud data. The data was post processed through PosPac, Waypoint's GPS and IMU (inertial measurement unit) post processing software, and LMS, Optech's LiDAR post processing software. PosPac is used to generate the trajectory file which contains the position (X, Y, Z) from differential GPS observations and the plane's attitude (roll, pitch, heading) from the IMU. LMS is used to join the discreet point range information to the trajectory information through a common time stamp and to calibrate the data. The calibration is achieved by first identifying common features in the overlap of adjacent flight lines, and then adjustments are applied to the IMU's angular offsets to align the data. Once finished, LMS refines the calibration further through a bundle adjustment to create the final calibrated data set. Classification of the calibrated LiDAR data set is achieved through the use of TerraScan, the industry standard software from TerraSolid for classifying LiDAR. Individual macros were defined that derive and refine a ground surface, vegetation, and buildings. These macros are also used to eliminate spurious points below the surface and high point artifacts. The Bradfield to Behms area was then manually checked and edited to eliminate low and high points as well as to ensure that points are classified appropriately. Breaklines were derived from LiDAR and imagery and help define water classes in the LiDAR data.
        - 2018-09-05 00:00:00 - The NOAA Office for Coastal Management (OCM) downloaded 110 laz files from the Alaska Division of Geological and Geophysical Surveys data Portal (https://elevation.alaska.gov/). The files contained classified elevation and

intensity measurements for the 2014 Bradfield to Behms data set. The data were in Alaska State Plane, Zone 5001 coordinates (NAD83, US survey feet) and NAVD88 elevations (GEOID12A) in feet. The data were classified: Class 1: Unclassified, Class 2: Bare-earth ground, Class 3: Low vegetation, Class 4: Medium Vegetation, Class 5: High Vegetation, Class 7: Noise, Class 8: Ground Model Keypoints, Class 9: Water. OCM processed all points to the Digital Coast Data Access Viewer (DAV).   OCM performed the following processing on the data for Digital Coast storage and provisioning purposes: 1. The LAStools software scripts lasinfo and lasvalidate were run on the laz files to check for errors.   2. An internal OCM script was run to check the number of points by classification and by flight ID and the gps times and intensity ranges.   3. Internal OCM scripts were run on the laz files to convert from Alaska State Plane, Zone 5001 coordinates to geographic coordinates, to convert from NAVD88 elevations to ellipsoid elevations using the GEOID12A model, to convert from feet to meters, to assign the geokeys, to assign a lidar domain profile, to sort the data by gps time and zip the data to database and to http.

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?
No

6.1.1. If metadata are non-existent or non-compliant, please explain:
Missing/invalid information:
- 1.7. Data collection method(s)
- 3.1. Responsible Party for Data Management
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.1.2. If there are limitations to data access, describe how data are protected
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive

facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

6.2. Name of organization or facility providing metadata hosting:
NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:
https://www.fisheries.noaa.gov/inport/item/53540

6.4. Process for producing and maintaining metadata
(describe or provide URL of description):
Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access
NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:
NOAA Office for Coastal Management (NOAA/OCM)

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:
https://coast.noaa.gov/dataviewer/#/lidar/search/where:ID=8592
https://coast.noaa.gov/htdata/lidar2_z/geoid12b/data/8592

7.3. Data access methods or services offered:

> Data is available online for custom and bulk downloads.

7.4. Approximate delay between data collection and dissemination:

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection
The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:
(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):
Office for Coastal Management - Charleston, SC

8.3. Approximate delay between data collection and submission to an archive facility:

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?
Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

9. Additional Line Office or Staff Office Questions
Line and Staff Offices may extend this template by inserting additional questions in this section.